



RESIDENTIAL CHECKLIST (RCL)
City of Dayton – Division of Building Inspection

RESIDENTIAL CODE OF OHIO
FOR 1, 2, & 3 FAMILY DWELLINGS AND ACCESSORY STRUCTURES
EFFECTIVE DATE MAY 27th 2006

Address: _____ Routing # _____

Description _____

This attachment is made part of and amends the drawings so as to include any of the applicable requirements. Special attention is to be given to items indicated by circled numbers entered on the drawings which refer to the corresponding paragraphs on these sheets. **The referenced code is the 2006 Residential Code of Ohio (RCO) for One, Two and Three-Family Dwellings as adopted by the Ohio Board of Building Standards.**

1. LOCATION ON LOT: (RCO: R302)

Exterior Walls: Walls with a fire separation distance **less than 3 feet** from property lines shall have not less than a 1-hour fire-resistive rating with exposure from both sides. Projections shall not extend **closer than 2 feet** from the line used to determine the fire separation distance and shall have a minimum 1-hour fire-resistive construction on the underside. **Openings are not permitted in the exterior wall.**

2. FOUNDATIONS: (RCO: R401, R402, R403, R404, R405)

Call Before You Dig; 800-362-2764 48 hours advance, Ohio Utilities Protection Services (OUPS)

- a. Soil Test: (RCO: R401)** The minimum load-bearing pressure of soil is **2000 psf**, where sand, silty sand, clayey sand, silty gravel and clayey gravel exist. The building official may require a soil test to determine the load-bearing capacity of the soil. In areas having expansive, compressive, shifting or unknown soil characteristics, **R401.4**
- b. Footings:** All exterior walls shall be supported on continuous solid masonry or concrete footings, wood foundations, or other approved structural systems which shall be of sufficient design to support safely the loads imposed as determined from the character of the soil. The size of the footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with **Section R402, Tables R401.4.1 & '99 ORC 502.3.4(2)**,---[this table for reference purposes only, not adopted for the 2006 RCO,] The minimum sizes of concrete or masonry footings shall be determined by the load-bearing value of the soil in lbs/sq ft--(psf)--. **Table R403.1. The minimum depth of all exterior footings, piers and foundation walls and other permanent supports of buildings and structures shall extend below the frost line of 32 inches.** Concrete shall have a minimum specified compressive strength, under severe weathering potential, as shown in Table R402.2. Concrete subject to freezing & thawing during construction shall be air-entrained concrete. Total air content shall not be less than 5% or more than 7%. See item #31 on this checklist for deck footer requirements.
- c. Stepped-Footing: (RCO: R403.1.5, R301)** The top surface of all footings shall be level. The bottom surface of footings shall not have a slope exceeding a **10 % slope (one unit vertical in 10 units horizontal)**. Footing shall be stepped where it is necessary to change the elevation of the top surface of the footing, or where the slope of the bottom surface of the footing will exceed 10% slope. Where structural elements of footers are not stepped---e.g. between an attached garage footer and a basement footer---footer connections shall be designed in accordance with accepted engineering practice. **Section R301:** In the event that an engineered design is adopted, a detailed section drawing with substantiating data and calculations, or a detailed section drawing bearing the seal of an Ohio Registered Design Professional responsible for the design shall be submitted.

d. Drainage: (RCO: R401.3, R405.1)

Lots shall be graded so as to drain surface water away from the foundation walls a minimum slope of 6 inches of fall within 10 feet. Where lot lines, walls, slopes or other physical barriers prohibit the minimum slope, drains or swales shall be provided to ensure drainage away from the structure. **R401.3.**

Foundation Drainage—Drains shall be provided around all concrete or masonry foundations that retain earth and enclosing habitable or useable spaces located below grade. **R405.1.**

A sump pump shall be provided to drain the porous layer and footings in group II, III, & IV, soils; see **Table R405.1**. The sump pump hole shall be minimum **24 inches in diameter** or **20 inches square**, and shall extend **24 inches** minimum below the bottom of the basement floor. **R405.1.**

- e. Foundation Wall: (RCO: R404, R406)** . Concrete or masonry shall be not less than the thickness of the wall supported. Minimum **8 inch** thick permitted under veneer frame walls. Where walls are **subject to hydrostatic pressure from ground water**, a design shall be provided for concrete or masonry foundation walls bearing the seal of an Ohio design professional. All concrete basement foundations and exterior walls, and other vertical concrete work shall be air-entrained-- per item 2b above. Exterior foundation walls of masonry or concrete construction enclosing habitable or useable storage space shall be **dampproofed** with not less than one coat of **3/8 inch** portland cement paring covered with a coat of approved bituminous material. In areas of a high water table or other severe soil-water conditions are known to exist, exterior foundation walls of habitable or useable storage space shall be **waterproofed with a membrane extending from the top of the footing to finished grade**. **R404.1.5, R404.1.3; Tables R404.1.1(1) & R404.1.1(2); & R406.1, R406.2.**

3. CONCRETE FLOORS: (RCO: R403.1, R403.3, R409.1, R506,)

- a. Slab-on-ground:** Slab-on-ground floors shall be a minimum **3.5 inches thick**, expansive soils shall meet the requirements of **section R403.1.8** The specified compressive strength of concrete is set forth in **Table R301.2(5)**. Fill shall be compacted. A 6-mil-thick polyethylene moisture retarder shall be applied over a minimum thickness of a **4 inch** base, of clean graded sand, gravel, or crushed stone. The moisture retarder may be omitted in garages, unheated accessory structures, walks, patios, and other areas not likely to be enclosed or heated in the future.

- b. Insulation:** See **Table R403.3** for minimum insulation requirements for frost protected footings in heated buildings. Foundation walls and the edges of slab-on-grade floors with exterior applied insulation shall have a rigid, opaque and weather resistant protective covering and extend a minimum of 6 inches below grade to prevent the degradation of thermal performance. **R409.1. See item 25d.**

- c. Concrete strength:** Porches, carport slabs, steps and other flat work exposed to the weather, and garage floor slabs shall be air-entrained, per item 2b above. and have a concrete strength of **3,500 psi**.

4. CEILING HEIGHT: (RCO: R305)

Minimum height: Habitable rooms, hallways, corridors, bathrooms, toilet rooms, laundry rooms and basements shall have a ceiling height of not less than **7 feet**. The required height shall be measured from the finished floor to the lowest projection from the ceiling.

- a. Habitable rooms in basements** shall have a ceiling height not less than 7 feet. Ceiling heights below beams, girders, and ducts spaced **4 feet** or more on center, the clear height shall be **6 feet, 6 inches**.
- b. Ceiling heights in basements without habitable spaces** shall be not less than 6 feet, 8 inches clear except under beams, girders, ducts, or other obstructions where the clear height shall be 6 feet, 4 inches.

- c. Habitable spaces created in existing basements** shall be permitted to have ceiling heights of not less than 6 feet, 8 inches. Obstructions may project to within 6 feet, 4 inches.

- d. Habitable spaces created in attics** shall have not more than 50% of the required floor area to have a sloped ceiling less than 7 feet in height with no portion of the required floor area less than **5 feet** in height.

5. FLOOR PLATES & SILLS: (RCO: R319, R403, R404.)

The wood sole plate resting on foundation walls shall be anchored to the foundation with anchor bolts a minimum of **½ inch diameter, 7 inches** into masonry or concrete spaced a maximum of **6 feet** on center and **12 inches maximum** from all exterior corners, and a minimum of not less than seven bolt diameters, approximately **3½ inch** from each end. **Anchoring of interior load bearing walls to slab is required.** Sills and sleepers on a concrete slab in direct contact with the ground shall require the use of an approved species and grade of lumber pressure preservatively treated, or decay-resistant heartwood of redwood, black locust, or cedars. All wood framing members that rest on concrete or masonry exterior foundation walls must be minimum of 8 inches from the ground. Concrete and masonry foundation walls shall be a minimum of **4 inches** above the finished grade where masonry veneer is used, and a minimum of **6 inches** elsewhere.

6. CRAWLSPACES: (RCO: R408, R1305, R1401)

- a. **Finished grade:** The finished grade of under-floor surface may be located at the bottom of the footings; however, where there is evidence that the groundwater table can rise to within 6 inches of the finished floor at the building perimeter or where there is evidence that the surface water does not readily drain from the building site, the grade in the under-floor space shall be as high as the outside finished grade, unless an approved drainage system is provided. **R408.6.**
- b. **Access:** Access openings shall be provided to all under-floor spaces. Access openings through the floor shall be a minimum of 18 inches by 24 inches. Openings through a perimeter wall shall be not less than 16 inches by 24 inches.. **R408.4. see RCO: M1305, M1408.4.**
- c. **Ventilation:** Ventilation openings shall be provided with corrosion-resistant wire mesh, with the least dimension of 1/8 inch. **The minimum net area of ventilation openings shall be a minimum of 1 sqft for each 150 sq feet of crawl space area.** Where the ground surface is treated with an approved vapor barrier material and one such ventilation opening is **within 3-feet of each corner** of said building, the total area of ventilation openings shall be permitted to be reduced to 1/1500 of the under-floor area. **R408.2**

7. FLOOR SHEATHING: (RCO: R503)

Plywood, particleboard and combination subfloor underlayment shall meet the allowable spans and thickness **for floor sheathing**. Plywood used **for structural subflooring** shall be C-C and C-D grades only and shall be applied continuous over two or more spans with face grain perpendicular to supports. Particleboard subfloor and combined subfloor underlayment shall conform to ANSI A208.1 – Type PBU and shall be not less than 1/4 inch in thickness. **R503.2, R503.3.**

8. BRIDGING: (RCO: R502)

- a. **Joist Bridging:** Joists having a **depth-to-thickness ratio exceeding 6 to 1 (2 x 12 or greater)**, based on nominal dimensions, shall be supported laterally by solid blocking, diagonal bridging (wood or metal) or a continuous 1 x 3 strip nailed across the bottom of the joist at intervals not exceeding 10 feet. **R502.5**

9. SMOKE ALARMS: (RCO: R313)

Smoke alarms shall be installed in each sleeping room, outside each separate sleeping area in the immediate vicinity of the bedrooms, and on each additional story of the dwelling, including basements and cellars, but not including crawl spaces and uninhabitable attics. In **new construction**, smoke detectors shall receive their primary power from the building wiring with battery backup. All detectors shall be interconnected to provide an alarm which will be audible in all sleeping areas. Smoke detectors may be battery operated when installed in **existing** buildings that undergo alterations, repairs or additions that do not result in the exposure of electrical wiring by removal of interior wall and ceiling finishes.

10. ATTIC ACCESS: (RCO: R807)

In buildings with combustible ceiling or roof construction, an accessible attic access framed opening **not less than 22 x 30 inches** shall be provided attic areas that exceed **30 sqft** and have a vertical height of **30 inches or greater**.

11. BONDING OF WALLS: (RCO: R703.7)

- a. **Stone & Masonry veneer** (to wood frame): shall be attached to the supporting wall with corrosion-resistant metal ties. **R703.7.2**
 - 1. Not less than *W1.7 U.S. gauge wire with minimum 2 inch hook embedded in mortar joint.*
 - 2. Not less than *No. 22 U.S. gauge x 7/8 inch wide corrugated sheet metal.*

12. MEANS OF EGRESS: (RCO: R311)

- a. **Exit door required:** No less than one exit door shall be provided from each dwelling unit. The required exit door shall provide direct access from the habitable portions of the dwelling to the exterior without requiring travel through a garage. **(R311.4.1). The required exit door shall be a side-hinge door not less than 3 feet wide and 6 feet 8 inches in height. R311.4.2.**
- b. **Landings at doors:** A **minimum 3-foot by 3-foot** landing shall be required on each side of a door. The floor or landing at the required exit door shall not be more than **1½ inches** lower than the top of the threshold. **R311.4.3**
- c. **Hallways:** The minimum width of a hallway or exit access shall be not less than **3 feet. R311.3**
- d. **Interior doors** to habitable rooms and basement stairs to be a minimum **2 feet 6 inches x 6 feet 8 inches**. Bathroom doors a minimum **2 feet 4 inches x 6 feet 8 inches. R311.4.2.1**

13. BATHROOM, WATER CLOSET COMPARTMENTS and Other Similar Rooms: (RCO: R303 & R307)

- a. Light and ventilation:** Window or skylight minimum 3 square feet in area, one half openable. Window not required when artificial light and mechanical ventilation rate of 50 cfm intermittent or 20 cfm continuous is provided. **R303.3**
- b. Fixtures:** Water closet, lavatory, bathtub or shower shall be spaced per **RCO: R307.2**. See also 24b on this checklist.
- c. Ceramic Tile: R702.4**

14. STAIRWAYS: (RCO: R311, R312)

- a. Clear Width:** Stairways minimum width is **36 inches** at all points above the handrail and below the required headroom height.
- b. Riser :** The maximum riser height is **8¼ inch** ; The minimum tread depth is **9 inches**. The greatest riser height and tread depth within any flight of stairs shall not exceed the smallest by more than **3/8 inches**. Open risers are permitted, provided that the opening between treads does not permit the passage of a **4 inch** diameter sphere.
- c. Headroom:** A **6 feet 8 inch** minimum headroom is required in all parts of the stairway , measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform.
- d. Handrails:** Shall be provided on at least one side of **stairways of 4 or more risers**. Handrails shall have a height of not less than **34 inches**, nor more than **38 inches**, measured vertically from the nosing of the treads. For handrail grip size, **see RCO: 311.5.6.3**.
- e. GUARDRAILS: (RCO: R312)** Porches, decks, balconies or raised floor surfaces located more than **30 inches** above the floor or grade below shall have guardrails not less than **36 inches** in height. Open sides of stairs with a total rise of more than **30 inches** above the floor or grade below shall have guardrails not less than **34 inches** in height. Required guardrails on open sides of stairways, raised floor areas, decks, balconies, and porches shall have **intermediate rails or ornamental enclosures, which do not allow passage of an object 4 inches or more in diameter and shall not be constructed in a manner that results in a ladder effect.**
- f. Stairway illumination:** All interior and exterior stairways shall be provided with a means to illuminate the stairs, including the landings and treads. **RCO: R303.5**
- g. Landings for stairways:** A floor or landing shall be provided at the top and bottom of each stairway .
- h. Special stairways:** Spiral stairs shall have a minimum width of **26 inches**, each tread depth a minimum of **7½-inches** min tread depth at **12 inches** from the narrower edge. All treads shall be identical with a maximum rise of **9½ inches** . **Minimum headroom shall be 6'-6"**. **RCO: R311.5.8**
- i. Under stair protection:** Enclosed accessible space under stairs shall have walls under stair surface and any soffits, protected on the enclosed side **with ½ inch gypsum board**. **RCO: R311.2.2**

15. LIGHT AND VENTILATION: (RCO: R303)

- a.** All habitable rooms shall have aggregate glazing area of not less than 8% of the floor area, one half openable. In lieu of glazed areas being openable, provide mechanical ventilation of .35 air changes per hour. **R303.1**
- b.** Glazed areas may be omitted (except emergency escape or rescue openings) when mechanical ventilation of .35 air changes per hour and artificial light of 6 footcandles at 30" above the floor is provided.
- c. Stairway Illumination:** See **item 14f** on this checklist.

16. ATTACHED GARAGES: (RCO: R309, R311, R1307)

- a. Opening Protection:** Entrance from a private garage into a room used for sleeping shall not be permitted. Other openings between the garage and the residence shall be equipped with 1-3/8 inch solid wood doors or 20 minute fire resistant rated doors, or metal insulated exterior doors. **R309.1.**
- b. Separation Required:** The garage shall be completely separated from the residence and its attic area by means of ½ inch gypsum board and not less than **5/8 inch Type X** gypsum board or equivalent beneath habitable rooms applied to the garage side. **R309.2**
- c. Floor surface:** Garage and carport floor surfaces shall be of approved noncombustible material, sloped to facilitate the movement of liquids to a drain or towards the main vehicle entry door. **R309.3**
- d. Garage access door:** A single hinged door not less than **2 feet 6 inches & 6 feet 8 inches** in height shall be required from all garages. A door between the attached garage and the dwelling shall be acceptable as meeting the requirements of this code . **RCO:311.4.2.2.**
- e. Appliances located in a garage:** shall conform to the requirements of **RCO: R1307.3**

17. ROOF DRAINAGE: (Housing Code ORC 93.33f)

All dwellings shall have a controlled method of water disposal from roofs that will collect and discharge all drainage to the ground surface. Roof drains and downspouts shall not be connected to the foundation drainage system. They shall be independent and shall not be interconnected. Rain gutters, downspouts, and leaders shall be provided to collect, conduct, and discharge all water from the roof and be maintained so as not to leak or cause dampness in walls, ceiling, or basements, or adversely affect the adjacent properties.

FOR RECOMMENDATION PURPOSES. THIS ORDINANCE NOT ADOPTED BY THE OBBS 2006 RCO.

18. ROOF VENTILATION: (RCO: R806)

- a.** Enclosed attics and enclosed rafter spaces shall have cross ventilation for each separate space of **not less than 1/150 of the area ventilated.** The total area may be reduced to 1/300, provided at least 50% and not more than 80% of the required ventilating area is provided by ventilators located in the upper portion of the space and a minimum of 3 feet above eave or cornice vents. The net free cross-ventilation area may be reduced to 1/300 when a vapor barrier having a transmission rate not exceeding 1 perm is installed on the warm side of the ceiling.
- b.** Where eave or cornice vents are installed, insulation shall not block the free flow of air. A **minimum of 1 inch** space shall be provided between the insulation and the roof sheathing at the location of the vent.

19. **FRAME CONSTRUCTION:** (RCO: Tables 301, R502, 602a-f, 703)

- a. Wall, floor, and roof-ceiling construction: (RCO: Chapters 5,6 & 8.)

- b. Minimum live loads: (Table 301.2(1), Table 301.4)

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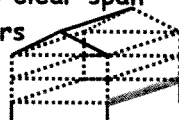
- c. Bearing:(RCO:R502.6)

The ends of each beam, girder, joist and rafter shall have not less than 1½ inches of bearing on wood or metal and not less than 3 inches on masonry or concrete. See exceptions.

- d. ALLOWABLE GIRDERS AND HEADER SPANS: (RCO: R502.5)

The allowable spans of girders fabricated of dimension lumber shall not exceed the values set in the following table.

RCO Table R502.5(1)
GIRDER & HEADER SPANS FOR EXTERIOR BEARING WALLS

Maximum spans for Douglas fir-spruce, Southern Pine and Spruce-pine-fir #2 and required (num of jack studs) <u>NJ</u> Ground snow load 30 psf---and roof live load is equal to or less than 20 psf																				
SIZE	Roof and ceiling				Roof, ceiling and One center-bearing floor				Roof, ceiling and One clear span floor				Roof, ceiling and Two center-bearing floors				Roof, ceiling and Two clear span floors			
																				
	Building width (feet) is measured perpendicular to the ridge																			
	20' 28' 36'				20' 28' 36'				20' 28' 36'				20' 28' 36'				20' 28' 36'			
Span		NJ		Span		NJ		Span		NJ		Span		NJ		Span		NJ		
2-2 x 4	3-6	3-2	2-10	1	3-1	2-9	2-4	1	2-8	2-4	2-1	1	2-3	2-7	2-0	1	2-1	1-8	1-6	2
2-2 x 6	5-5	4-8	4-2	1	4-6*	4-0*	3-7	2	3-11*	3-5*	3-0	2	3-9	3-3	2-11	2	3-1	2-8	2-4	2
2-2 x 8	6-10*	5-11	5-4	2	5-9	5-0	4-6	2	5-0	4-0	3-10	2	4-9	4-2	3-9	2	3-10*	3-4	3-0	3
2-2 x 10	8-5	7-3	6-6	2	7-0	6-2	5-6	2	6-1	5-3	4-8	2	5-9*	5-1*	4-7	3	4-9*	4-1	3-8	3
2-2 x 12	9-9	8-5	7-6	2	8-2	7-1	6-5	2	7-1*	6-1	5-5	3	6-8*	5-10	5-3	3	5-6	4-9	4-3	3
3-2 X 8	8-4	7-5	6-8	1	7-2*	6-3	5-8	2	6-3	5-5	4-10	2	5-11	5-2	4-8	2	4-10	4-2	3-9	2
3-2 X 10	10-6*	9-1	8-2	2	8-9	7-8	6-11	2	7-7	6-7	5-11	2	7-3	6-4	5-8	2	5-11*	5-1*	4-7	3
3-2 X 12	12-2	10-7	9-5	2	10-2	8-11	8-0	2	8-10	7-8	6-10	2	8-5	7-4	6-7	2	6-10*	5-11	5-4	3
4-2 X 8	9-2	8-4	7-8	1	8-1	7-3	6-7	1	7-2*	6-3	5-7	2	6-10*	6-0	5-5	2	5-7	5-10	4-4	2
4-2 X 10	11-8*	10-6*	9-5	2	10-1*	8-10	8-0	2	8-9	7-7	6-10	2	8-4	7-4	6-7	2	6-10	5-11	5-3	2
4-2 X 12	14-1*	12-2	10-11	2	11-9	10-3	9-3	2	10-2	8-10	7-11	2	9-8	8-6	7-8	2	7-11	6-10	6-2	3
* REDUCE REQUIRED JACK STUDS (NJ) BY ONE																				

e. Beams and Girders: (RCO: 502.5)

The allowable span for girders fabricated of dimension lumber shall not exceed the values set forth in **Tables R502.5(1) exterior bearing walls R502.5(2) interior bearing walls (refer to the RCO 2006)**. However, when spans and girder sizes are computed independently and designed in accordance with accepted engineering practice, **Section R301.1.3**, submit the substantiating data and calculations, or provide documentation bearing the seal of an Ohio Registered Design Professional responsible for the design, and submit it to the structural field inspector.

f. Wall Bracing: (RCO: R602.10)

Exterior and foundation wall panels of frame construction shall be braced with one of the following:

1. 1 x 4 let in braces, or **approved** metal strap devices installed in accordance with the manufacturer's specifications.
2. Wood structural panels in accordance with **R602.10.3**
3. Particleboard in accordance with **RCO: R602.10.3**
4. Gypsum sheathing or other types of gypsum board applied vertically or horizontally to studs spaced a maximum of **24 inches on center** fastened in accordance with **Table R602.3(1)**.
5. Nominal **½ inch** and **25/32 inch** structural fiberboard sheathing applied vertically or horizontally on studs spaced a maximum of **16 inches on center** and installed in accordance with **Table R602.3(1)**.
6. Portland cement plaster on studs spaced a maximum of **16 inches** on center in accordance with **Section R703.6.1**.

g. Floor Trusses and Roof Trusses: (RCO: R502.11, R802.10)

Wood trusses shall be designed in accordance with approved engineering practice. Truss members shall not be cut or altered unless so designed. Floor truss diagrams and pre-engineered roof truss diagrams, along with layout – with data and calculations – shall bear the seal of an Ohio Registered Design Professional and shall be presented to the structural field inspector for approval prior to the erection of any truss. A roof truss layout is required

h. Asphalt Roof Shingles: (RCO: R905.2)

Asphalt shingles shall only be used on roofs with slopes of two units vertical in 12 units horizontal **(2:12)** or greater. **ICE PROTECTION:** an ice barrier of at least **two layers of underlayment** cemented together or a self-adhering polymer modified bitumen sheet, shall extend from the eave's point at least **24 inches** inside the exterior wall line of the structure. **REROOFING:** New roof coverings shall not be installed without first removing existing roof coverings when the roof has two or more layers of any type of roofing. **RCO: R907.**

i. Roof Tie-Down (RCO: R802.11, R301.1)

Uplift resistance---Roof assemblies which are subject to wind uplift pressures of 20 lbs/ft or greater shall have roof rafters or trusses attached to their supporting assemblies by connections capable of providing resistance of wind speed @ 90mph. The uplift connection requirements may be found in the *required strength of truss or rafter connections to resist wind uplift forces* table, **Table R802-11**.

A continuous load path shall be provided to transmit the up-lift forces from the rafter or truss ties to the foundation. The construction of buildings and structures...shall result in a system that provides a complete load path that meets all requirements for the transfer of all loads from their point of origin through the load resisting elements to the foundation. **R301.1**

j. Fire Blocking: (RCO: R602.8, R317)

Fire blocking shall be provided to cut off all concealed draft openings, vertical and horizontal, in all wood frame construction as follows: In **concealed spaces** of stud walls and partitions, including furred spaces, at the ceiling and floor level.

1. At **all interconnections** between concealed vertical and horizontal spaces, soffits, drop ceiling, cove ceilings, and the like.
2. In concealed spaces **between stair stringers** at the top and bottom of the un.
3. At **openings** around vents, pipes, ducts, chimneys and fireplaces at ceiling and floor level, with non-combustible materials. **RCO: R317.3.1**

k. Floor Cantilevers: (R502.3.3)

Wood floor joist cantilever spans must not exceed the nominal depth of the joist, except where supporting:

1. A light frame bearing wall and roof only in accordance with **Table R502.3.3(1)** (3.1 backspan ratio).
2. An exterior balcony constructed in accordance with **Table R502.3.3(2)** (2.1 backspan ratio).
3. Connectors capable of **resisting the indicated uplift force** shall be provided at the back space support.
4. A full-depth rim joist shall be provided **at the cantilever end of the joists. Solid blocking shall be provided at the cantilever support.**

20. MASONRY CHIMNEYS: (RCO: R1001)

Masonry chimneys shall be constructed, anchored, supported and reinforced as required in this chapter and the applicable provisions of Chapters 3, 4 and 6. Chimneys shall be structurally sound, durable, smoke tight and capable of conveying flue gases to the exterior safely. **RCO: R1001.1**

- a. **Termination:** Chimneys shall extend at least **2 feet higher** than any portion of the building within 10 feet, but shall be **not less than 3 feet** above the point where the chimney passes through the roof. **RCO: R1001.6**
- b. **Crickets:** Chimneys shall be provided with crickets when the dimension parallel to the ridgeline is **greater than 30 inches** and does not intersect the ridgeline. Crickets shall be constructed in conformity with **RCO: R1001.17**.

21. MASONRY FIREPLACE: (RCO: R1003, R1004, R1006)

Masonry fireplaces shall be constructed in accordance with **RCO; R1003, Table R1003.1**, and the applicable provisions of **Chapters 3 and 4**.

- a. **Factory-built fireplaces:** **RCO: R1004, R1006.1.1**

22. EXTERIOR AIR SUPPLY: (RCO: R1005, R1701)

Exterior Air: Factory-built or masonry fireplaces shall be equipped with an **exterior air supply** to assure proper fuel combustion. **RCO: R1005.1**

- a. **Exterior air intake:** shall provide combustion air from the exterior of the dwelling and shall not be located within the garage, attic, basement, or crawl space of the dwelling. The exterior air intake shall be covered with a corrosion-resistant screen of $\frac{1}{4}$ - inch mesh. **RCO: R1005.2**
- b. **Passageway:** The **combustion air passageway** shall be a **minimum of 6 square inches** and not more than 55 square inches. **RCO: R1005.4**
- c. **Outlet:** The **exterior air outlet** shall be located in the back or on the sides of the firebox chamber or within **24 inches** of the firebox opening on or near the floor. The outlet shall be closable and designed to prevent burning material from dropping into concealed combustible spaces. **RCO: R1005.5**
- d. **Combustion Air :** **RCO: R1701.1**

23. EXTERIOR WALL COVERING: (RCO: R703)

- a. 14# asphalt-saturated felt or other approved weather-resistant material shall be applied over studs or sheathing of all exterior walls as required by **Table R703.4**.
- b. Provide corrosion-resistive flashing at top and side of all exterior window and door openings in such manner as to be leak proof. **RCO: R703.8**
- c. Weather-resistant siding shall be installed in a manner to restrict the entrance of moisture and weather and shall be attached in accordance with **Table R703.4**.

24. INTERIOR WALL COVERINGS: (RCO: R702, R315,R314)

- a. **Interior wall coverings** shall be installed in accordance with **RCO: R701 & R702, and Tables R702.1(1), R702.1(2), R702.1(3), R702.3.4.**
- b. **Shower and bath areas**, floors, and walls shall be finished with a smooth, hard, nonabsorbent surface not less than **6 feet** above the floor. **RCO: R702.4.**
- c. **Wall and ceiling finishes** shall have a flame spread index of not greater than 200 and maximum smoke-developed index of 450. **RCO: R315.**
- d. **Foam Plastics: RCO: R314.**

25. INSULATION: (RCO: R314, R316, R318,)-(See Appendix C – Energy Conservation) (R403.1, R409)

Energy conservation measures for one, two, and three family dwellings with the following provisions, shall be deemed to satisfy the building envelope requirements.

- a. **General Requirements: (Ohio Building Code 2005 Chapter 13) Appendix E.** Must use **ASHRAE 90.1 requirements of the OBC: appendix E.**
- b. **Moisture Vapor Retarders: RCO: R318**
- c. Foam plastics shall be separated from the interior of a building by a minimum **½ inches** gypsum board, adhesives are prohibited. **RCO: R314.2.**
- d. The edges of slab-on-grade floors with exterior applied insulation shall have be protected to prevent the degradation of thermal performance. **RCO: R403.1, R409.1.**

26. GLAZING: (RCO: R308)

This section includes several regulations on glazing depending on the location of the glazing.

- a. Glass used in doors and certain glazed panels is regulated by Federal Regulation CPSC 16-CFR, Part 1201. **RCO: R308.**
- b. The following shall be considered **specific hazardous locations for the purposes of glazing: (RCO: R308.4)** **Each pane of glazing installed in these location shall be provided with a label which is visible in the final inspection. RCO: R308.1.1.**
 - 1. In ingress and means of egress doors.
 - 2. In fixed and sliding panels of sliding patio door assemblies and panels in swinging doors.
 - 3. In storm doors.
 - 4. In all unframed swinging doors.
 - 5. In doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing in any part of a building wall enclosing these compartments where the bottom edge of the glazing is **less than 60 inch** above the drain inlet and **36 inch horizontally** from the inside edge of the tub or compartment.
 - 6. In an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a **24 inch** arc of the door in a closed position and whose bottom edge is less than **60 inch** above the floor or walking surface.
- c. Glazing in **louvered windows or жалousies.** **RCO: R308.2.**
- d. Glazing in **skylights and sloped glazing.** **RCO: R308.6.**
- e. Glazing in **glass in green houses.** **RCO: R308.6.6.**
- f. Sliding glass doors.**RCO:R308.**

27. EMERGENCY ESCAPE and RESCUE OPENINGS: (RCO: R310)

Every sleeping room shall have at least one operable window or exterior door approved for emergency egress or rescue. The units must be operable from the inside to a full clear opening without the use of a key, tool, or special knowledge. Window sill height shall be not more than **44 inches** above the floor, **minimum net clear opening of 5.7 sq feet** (5.0 sq feet for grade floor), minimum clear dimensions of **22 inch high and 24 inch wide**. (RCO: R310.1, R310.1.1, R310.1.2, R310.1.3).

28. DWELLING UNIT SEPARATION: (RCO: R317)

Dwelling units in two-family dwellings shall be separated from each other by **wall and/or floor assemblies** having **not less than 1-hour fire-resistance rating**.

Fire-resistance-rated wall assemblies and floor-ceiling assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend to the underside of the roof sheathing.

29. RAMPS: (RCO: R311.6)

- a. **Maximum slope of one unit vertical in eight units horizontal (12.5% slope).**
- b. **Landings required; a minimum 3 foot x 3 foot landing** at top and bottom of ramps, where doors open onto ramps, and where the ramps change direction.
- c. **Handrails required shall be provided** on at least one side of all ramps **exceeding a slope of one unit vertical in twelve units horizontal (8.33% slope).**

30. CLOTHES DRYER: (RCO: M1501)

Dryer vents shall exhaust to the outdoors and shall be equipped with a back-draft damper.

31 WOOD DECKS: (RCO: Table R301, R319, R403)

- a. All structural members used in wood decks shall support a minimum live load of foot (**40 PSF**). Any anticipated dead load should be added to the total weight to be supported. **RCO: Table R301.5**
- b. **Footings:** Shall be supported on undisturbed natural soils or engineered fill. The minimum size of footers supporting piers and columns of decks without roof loads shall be based on the tributary area per post and the soil bearing capacity. Exterior deck footers of poured in place concrete shall be a **minimum of 8 inches thick** and extend below the frost line of **32 inches**. (RCO: R403.1.1, R403.4). Wood posts, poles, and columns which are embedded in concrete in direct contact with the ground and embedded in concrete exposed to the weather shall be **approved pressure-treated wood** suitable for ground contact use. All concrete shall be air-entrained:--**see item #2**. All wood in contact with the ground and that supports **permanent structures** intended for human occupancy shall be **approved pressure preservative treated wood** suitable for ground contact use. **RCO: R319.1.3.**
- c. **See item 14, Stairways, and item 19, deck framing on this checklist.**

32. CERTIFICATE OF ELEVATION:

In Flood Zones the applicant shall have a *Federal Emergency Management Agency Elevation Certificate* completed by a registered surveyor to record as-built elevation data. (**RCGO 152.70**). In areas with no elevation specified, the structure shall have the lowest floor, including basement, elevated at least two feet above the highest adjacent natural grade.

Before the final Certificate of Use and Occupancy is to be issued the '*Elevation Certificate*' is required to be submitted and approved by the Floodplain Administrator.